

IN THE CLAIMS:

The claims are as follows:

1 . (Previously Presented) A method for monitoring data resources of a data processing network on behalf of new consumer of monitoring data to the data processing network, said method comprising:

determining monitoring requirements of said new consumer, wherein said monitoring requirements include:

a list of data resources monitored for said new consumer;

metrics of said monitoring data for said new consumer;

a data format for monitoring data provided to said new consumer;

a time interval between periods of sending said monitoring data to said new consumer; and

actions taken during failure of said data resource;

comparing the monitoring requirements of the new consumer with monitoring capabilities of a plurality of monitoring entities to identify at least one monitoring entity including monitoring capabilities matching the monitoring requirements of the new consumer, wherein:

said monitoring entities monitor said data resources of said data processing network; and said monitoring capabilities including one or more of:

a current set of data resources being monitored by each of said plurality of monitoring entities;

a set of data resources which each of said plurality of monitoring entities is capable of monitoring;

monitoring metrics which each of said plurality of monitoring entities is currently monitoring;

monitoring metrics which each of said plurality of monitoring entities is capable of currently monitoring;

a current monitoring period; and

data format capabilities of each of said plurality of monitoring entities;

and

in response to identifying at least one monitoring entity of said plurality of monitoring entities including monitoring capabilities matching the monitoring requirements of the new consumer, selecting at least one of the identified monitoring entities and binding the new consumer to the selected at least one of the identified monitoring entities,

wherein binding said new consumer to said selected at least one of the identified monitoring entities comprises establishing a connection between said new consumer and said selected at least one of the identified monitoring entities, sending a description of the new consumer's monitoring requirements to said selected at least one of the identified monitoring entities, and configuring said selected at least one of the monitoring entities to perform said new consumer's monitoring requirements; and

in response to a failure to identify at least one of the monitoring entities having monitoring capabilities matching all monitoring requirements of the new consumer, initiating a negotiation between the new consumer and a plurality of monitoring entities to select a best match, relative to other matches based on quality of service parameters, between the monitoring requirements of the new consumer and the monitoring capabilities of the plurality of monitoring entities.

2-5. (Cancelled).

6. (Previously Presented) The method according to claim 1, wherein the comparing requirements with capabilities comprises comparing a required monitoring granularity with monitoring granularity capabilities of each of the plurality of monitoring entities.

7. (Cancelled).

8. (Previously Presented) The method according to claim 1, further comprising:

the new consumer sending a description of its monitoring requirements to a repository;
the plurality of monitoring entities sending descriptions of their respective monitoring capabilities to the repository; and
storing the descriptions of requirements and capabilities in the repository;
wherein the comparing comprises comparing the descriptions of requirements and capabilities stored in the repository.

9. (Previously Presented) The method according to claim 8, further comprising creating a binding document describing the monitoring performed for the new consumer by the selected at least one of the monitoring entities, and sending the binding document to the repository.

10. (Previously Presented) The method according to claim 8, wherein the descriptions of monitoring entities' capabilities comprise a list of the metrics currently being monitored for each of said list of monitored data resources.

11. (Previously Presented) The method according to claim 10, wherein the descriptions of said monitoring entities' capabilities comprise currently active monitoring parameters for each monitoring metric.

12. (Previously Presented) The method according to claim 10, wherein the descriptions of said monitoring entities' capabilities comprise the data format for each monitoring metric.

13. (Cancelled).

14. (Previously Presented) The method according to claim 1, further comprising:
using a common sub-expression finder module to identify a monitoring entity having at least one sub-expression in common with the new consumer, and selecting the monitoring entity having the at least one common sub-expression.

15-25. (Cancelled).

26. (Previously Presented) A data processing system for monitoring resources of a data processing network, comprising:

a data storage unit for storing:

monitoring requirements of a new consumer, said monitoring requirements

including:

a list of data resources monitored for said new consumer;

metrics of said monitoring data for said new consumer;

a data format for monitoring data provided to said new consumer;

a time interval between periods of sending said monitoring data to said new

consumer; and

actions taken during failure of said data resource; and

monitoring capabilities of each of a plurality of monitoring entities, including at least one monitoring entity matching the monitoring requirements of the new consumer, said monitoring capabilities including one or more of:

a current set of data resources being monitored by each of said plurality of monitoring entities;

a set of data resources which each of said plurality of monitoring entities is capable of monitoring;

monitoring metrics which each of said plurality of monitoring entities is currently monitoring;

monitoring metrics which each of said plurality of monitoring entities is capable of currently monitoring;

a current monitoring period; and

data format capabilities of each of said plurality of monitoring entities; and

a monitoring manager, responsive to monitoring requirements of said new consumer, for comparing the monitoring requirements of the new consumer with monitoring capabilities of said plurality of monitoring entities stored in the data storage unit to identify at least one monitoring

entity including monitoring capabilities matching the monitoring requirements of the new consumer, wherein said monitoring entities monitor said data resources of said data processing network; and

in response to identifying at least one monitoring entity of said plurality of monitoring entities including monitoring capabilities matching the monitoring requirements of the new consumer, selecting at least one of the identified monitoring entities and binding the new consumer to the selected at least one of the identified monitoring entities,

wherein binding said new consumer to said selected at least one of the identified monitoring entities comprises establishing a connection between said new consumer and said selected at least one of the identified monitoring entities, sending a description of the new consumer's monitoring requirements to said selected at least one of the identified monitoring entities, and configuring said selected at least one of the monitoring entities to perform said new consumer's monitoring requirements and

in response to a failure to identify at least one of the monitoring entities having monitoring capabilities matching all monitoring requirements of the new consumer, initiating a negotiation between the new consumer and a plurality of monitoring entities to select a best match, relative to other matches based on quality of service parameters between the monitoring requirements of the new consumer and the monitoring capabilities of the plurality of monitoring entities.

27. (Previously Presented) The data processing system according to claim 26, wherein the monitoring manager comprises:

a component for handling registration and de-registration of new and existing consumers, respectively;

a selector for selecting at least one monitoring entity of said plurality of monitoring entities for said new consumer; and

a connection manager for establishing a connection between the new consumer and the selected at least one monitoring entity.

28. (Previously Presented) The data processing system according to claim 26, wherein the monitoring manager further comprises a resource optimizer for determining at least one of said plurality of monitoring entities capable of generating said monitoring metrics from data measured for a data resource, according to said monitoring requirements.

29. (Previously Presented) A distributed data processing system comprising:
a set of data processing apparatuses each comprising at least one resource;
a set of data processing apparatuses each comprising at least one new consumer requiring monitoring data for a resource;

at least one data storage unit for storing a repository of monitoring requirements of the new consumer and existing consumers, and for storing monitoring capabilities of each of a plurality of monitoring entities, said monitoring requirements of the new consumer including:

a list of data resources monitored for said new consumer;
metrics of said monitoring data for said new consumer;
a data format for monitoring data provided to said new consumer;
a time interval between periods of sending said monitoring data to said new consumer; and

actions taken during failure of said data resource; and
said monitoring capabilities of each of a plurality of monitoring entities, including at least one monitoring entity matching the monitoring requirements of the new consumer, said monitoring capabilities including one or more of:

a current set of data resources being monitored by each of said plurality of monitoring entities

a set of data resources which each of said plurality monitoring entities is capable of monitoring

monitoring metrics which each of said plurality of monitoring entities is currently monitoring;

monitoring metrics which each of said plurality of monitoring entities is capable of currently monitoring;

a current monitoring period; and

data format capabilities of each of said plurality of monitoring entities and a monitoring manager, responsive to the monitoring requirements of said new consumer, for comparing the monitoring requirements of the new consumer with monitoring capabilities of said plurality of monitoring entities stored in the data storage unit to identify at least one monitoring entity including monitoring capabilities matching the monitoring requirements of the new consumer, wherein said monitoring entities monitor said data resources of said data processing network; and

in response to identifying at least one monitoring entity of said plurality of monitoring entities including monitoring capabilities matching the monitoring requirements of the new consumer, selecting at least one of the identified monitoring entities and binding the new consumer to the selected at least one of the identified monitoring entities,

wherein binding said new consumer to said selected at least one of the identified monitoring entities comprises establishing a connection between said new consumer and said selected at least one of the identified monitoring entities, sending a description of the new consumer's monitoring requirements to said selected at least one of the identified monitoring entities, and configuring said selected at least one of the monitoring entities to perform said new consumer's monitoring requirements; and

in response to a failure to identify at least one of the monitoring entities having monitoring capabilities matching all monitoring requirements of the new consumer, initiating a negotiation between the new consumer and a plurality of monitoring entities to select a best match, relative to other matches based on quality of service parameters between the monitoring requirements of the new consumer and the monitoring capabilities of the plurality of monitoring entities.

30-31. (Cancelled).

32. (Previously Presented) A computer storage device tangibly storing instructions executable by a computer to perform a method for monitoring data resources of a data processing

network on behalf of new consumer of monitoring data to the data processing network, said method comprising:

determining monitoring requirements of said new consumer, wherein said monitoring requirements include:

- a list of data resources monitored for said new consumer;
- metrics of said monitoring data for said new consumer;
- a data format for monitoring data provided to said new consumer;
- a time interval between periods of sending said monitoring data to said new

consumer; and

actions taken during failure of said data resource;

comparing the monitoring requirements of the new consumer with monitoring capabilities of a plurality of monitoring entities to identify at least one monitoring entity

including monitoring capabilities matching the monitoring requirements of the new consumer;

wherein:

said monitoring entities monitor said data resources of said data processing network; and

said monitoring capabilities including one or more of:

a current set of data resources being monitored by each of said plurality of monitoring entities;

a set of data resources which each of said plurality of monitoring entities is capable of monitoring;

monitoring metrics which each of said plurality of monitoring entities is currently monitoring;

monitoring metrics which each of said plurality of monitoring entities is capable of currently monitoring;

a current monitoring period; and

data format capabilities of each of said plurality of monitoring entities;

and

in response to identifying at least one monitoring entity of said plurality of monitoring entities including monitoring capabilities matching the monitoring requirements of the new consumer, selecting at least one of the identified monitoring entities and binding the new consumer to the selected at least one of the identified monitoring entities,

wherein binding said new consumer to said selected at least one of the identified monitoring entities comprises establishing a connection between said new consumer and said selected at least one of the identified monitoring entities, sending a description of the new consumer's monitoring requirements to said selected at least one of the identified monitoring entities, and configuring said selected at least one of the monitoring entities to perform said new consumer's monitoring requirements; and

in response to a failure to identify at least one of the monitoring entities having monitoring capabilities matching all monitoring requirements of the new consumer, initiating a negotiation between the new consumer and a plurality of monitoring entities to select a best match, relative to other matches based on quality of service parameters, between the monitoring requirements of the new consumer and the monitoring capabilities of the plurality of monitoring entities.

33. (Cancelled).